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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/533,903	05/05/2005	Satoru Ishino	SON-2859	8008

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EXAMINER

MAY, ROBERT J

ART UNIT

PAPER NUMBER

2875

DATE MAILED: 09/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/533,903

Applicant(s)

ISHINO ET AL.

Examiner

Robert May

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 9-14 is/are rejected.
- 7) ☒ Claim(s) 7, 8, 15 and 16 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 May 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>5/5/05</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Specification

The abstract of the disclosure is objected to because the abstract exceeds 150 words and exceeds 15 lines of text and is more than one paragraph. Correction is required. See MPEP § 608.01(b).

Claim Objections

Claims 4, 7-8, 12, and 15-16 are objected to because "the center plane" lacks antecedent basis.

Claims 3 and 11 are objected because "said cylindrical surface portion that forms a part of said second reflective surface" lacks antecedent basis.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3, 9, and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Wohlers (US Pat 3,152,765). Wohlers discloses in Figure 3, a reflector that can be used for an electronic flash device comprising a pair first reflective surfaces 4,5 which forms portions of a cylindrical surface and face one another (Col 1, lines 60-62), a second reflective surface 1 that is contiguous with said pair of first reflective surfaces

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and wherein a light source 2 is housed and the contiguous portions c,d are set closer to the opening of said pair of first reflective portions than center of housed light source 2 as shown in Figure 3.

Regarding Claims 3 and 11, Wholers discloses the distance between the contiguous portions c,d as being smaller than the diameter of the cylindrical surface portion that forms part of said second reflective surface (Col 3, lines 15+).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toshibumi (JP 09-166815) in view of Wholers. Toshibumi discloses in Figures 4 and 11, a reflector for a flash device comprising a light source 1 a pair of first reflective surfaces 11b (Fig 11) that face one another, a second cylindrical reflective surface 11a (Fig 1) that is contiguous with the first reflector surfaces 11b wherein the contiguous portions are set closer to an opening of said pair of first reflective surfaces 11b than a center portion k4 of the light source 1. Toshibumi fails to disclose the pair of first reflective surfaces as being cylindrical. Wohlers discloses a reflector with a pair of first reflective surfaces 4,5 that are cylindrical and face one another (Col 1, lines 60-62) for creating the greatest possible luminous distribution of

the beam (Col 1, lines 69-71). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the first reflective surfaces of Toshibaumi with the cylindrical reflective surfaces of Wohlers for creating the greatest possible luminous distribution of the beam.

Claims 2, 4-6, 10, and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toshibaumi (JP 09-166815) and Wohlers as applied to Claims 1 and 9 above and further in view of Hideaki (JP 09-197497).

Regarding Claims 2,6, 10 and 14, Toshibaumi discloses in Figure 4 the second reflective surface 11b comprising a cylindrical portion wherein the center portion k4 of the light source is the center of radius of curvature of the cylindrical portion of the second reflective surface. In Figure 4B Toshibaumi discloses parallel flat portions 11d that are portions of the cylindrical surface and are substantially parallel with a center plane about which said pair of first reflective surfaces 11a are symmetrical. Toshibaumi fails to disclose a pair of inclined flat surface portions that are provided as portions of said cylindrical surface portions that extend in tangential directions from the contiguous portions. Hideaki discloses in Figures 1 and 2, inclined flat portions that are provided as portions of the cylindrical surface portion of the second reflective surface that extend in tangential directions from the contiguous portions (shown but not labeled) to efficiently irradiate an object with excellent distribution property (Abstract). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the second reflecting surface of Toshibaumi with the inclined flat surfaces of Hideaki to efficiently irradiate an object with excellent distribution property.

Regarding Claims 4 and 12, Toshibumi fails to disclose the second reflective surface formed in an oval shape. Hideaki discloses in Figure 1 the second reflective surface 12a as being in a oval shape (elliptical reflecting surface- Abstract) to efficiently irradiate an object with excellent distribution property (Abstract). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to efficiently irradiate an object with excellent distribution property.

Regarding Claims 5 and 13, Toshibumi discloses in Figure 4 the second reflective surface 11b comprising a curved portion wherein the center portion k4 of the light source is the center of radius of curvature of the curved portions of the second reflective surface. In Figure 4B Toshibumi discloses parallel flat portions 11d that extend parallel with a center plane from perpendicular intersection portions where the radius of curvature intersects a perpendicular plane that passes the center portion and is perpendicular to the center plane. Toshibumi fails to disclose a pair of inclined flat surface portions that are provided as portions of said cylindrical surface portions that extend in tangential directions from the contiguous portions. Hideaki discloses in Figures 1 and 2, inclined flat portions that are provided as portions of the cylindrical surface portion of the second reflective surface that extend in tangential directions from the contiguous portions (shown but not labeled) to efficiently irradiate an object with excellent distribution property (Abstract). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the second reflecting surface of Toshibumi with the inclined flat surfaces of Hideaki to efficiently irradiate an object with excellent distribution property.

Allowable Subject Matter

Claims 7-8 and 15-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: Regarding Claims 7 and 15, prior art does not teach or show a second reflective surface comprising a first curved surface portion with its radius of curvature at the center portion of the light source in combination with a second curved portion where the second curved portions radius of curvature is located either closer or further from the contiguous portions than the center portion of the light source.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Sakurai (5,641,218) and Sugawara (2003/0007359) disclose reflectors with cylindrical reflective surfaces.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert May whose telephone number is (571) 272-5919. The examiner can normally be reached between 9 am– 5:30pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on (571) 272-2378. The fax number for the organization where this application or proceeding is assigned is (571) 273-8300 for all communications.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval PAIR system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RM

9/1/06



RENEE LUEBKE
PRIMARY EXAMINER